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PATTERNING OF HIGH COERCIVITY MAGNETIC MEDIA BY ION IMPLANTATION

ABSTRACT OF THE DISCLOSURE

A servo-patterned magnetic recording medium, comprising:

a magnetic layer having a surface with substantially uniform topography, the magnetic layer including a data zone and a servo pattern, the servo pattern comprising:

- (a) a first patterned plurality of regions of first, higher values of magnetic coercivity H_c and magnetic remanence-thickness product Mrt ; and
- (b) a second patterned plurality of ion-implanted regions of second, lower values of H_c and Mrt ; wherein the second, lower values of H_c and Mrt are sufficiently lower than the first, higher values of H_c and Mrt as to permit sensing for enabling accurate positioning of a read/write transducer head in the data zone but sufficiently high for providing the medium with thermal stability, high amplitude of magnetic transition, and high signal-to-noise ratio.